SONY

3-754-506-21 (1)

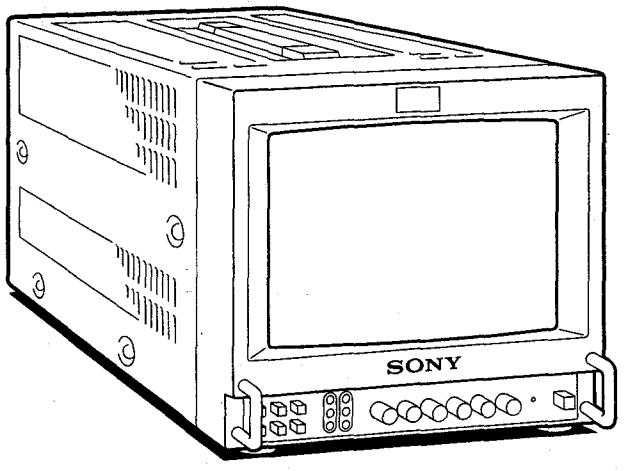
English

Trinitron® Color Video Monitor

PVM-9044QM/9041QM
PVM-9040ME

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.



The illustration shows the PVM-9044QM/9041QM.
L'illustration présente le PVM-9044QM/9041QM.
Die Abbildung zeigt den PVM-9044QM/9041QM.
La ilustración corresponde al PVM-9044QM/9041QM.
L'Illustrazione mostra il PVM-9044QM/9041QM.

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English

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

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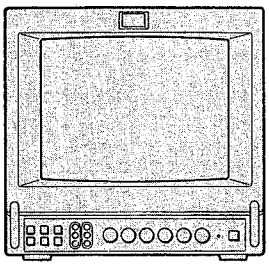
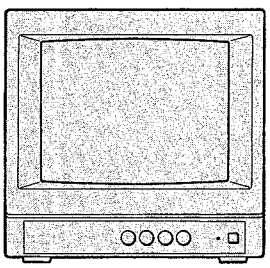
This instruction manual covers the PVM-9044QM, PVM-9041QM and PVM-9040ME. The differences among the models are clearly described in the text.

PVM-9044QM/9041QM



PVM-9040ME



Precautions

On safety

- **PVM-9044QM/9041QM:** Operate the unit on 100 – 240 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1A/1B battery pack (not supplied). Do not use any other batteries.
- **PVM-9040ME:** Operate the unit only on 100 – 240 V AC. Use only the supplied AC power cord. Do not use any other type.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.
As a safety precaution, unplug the unit before cleaning it

On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

Features

Four color systems available

(PVM-9044QM/9041QM only)

The monitor can display PAL, SECAM, $NTSC_{3.58}$ and $NTSC_{4.43}$* signals. The appropriate color system is selected automatically.

* A signal of $NTSC_{4.43}$ is used for playing back NTSC recorded video cassettes with a video tape recorder/player especially designed for use with this system.

Super Fine Pitch Trinitron picture tube

(PVM-9044QM only)

The Super Fine Pitch Trinitron picture tube provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Blue only picture

(PVM-9044QM/9041QM only)

The picture can be displayed in blue and black only. This facilitates hue adjustment and the observation of video noise.

Analog RGB/component input connectors

(PVM-9044QM/9041QM only)

Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

Y/C input connector

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, assuring video quality.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Comb filter

When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

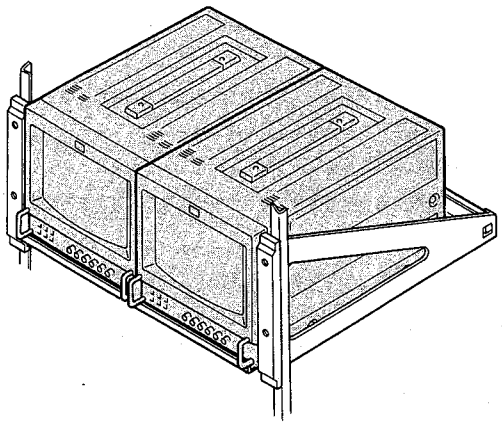
Automatic termination

The Y/C, VIDEO IN and EXT SYNC IN* connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

* The EXT SYNC IN connector is provided with the PVM-9044QM/9041QM only.

EIA standard 19-inch rack mounting

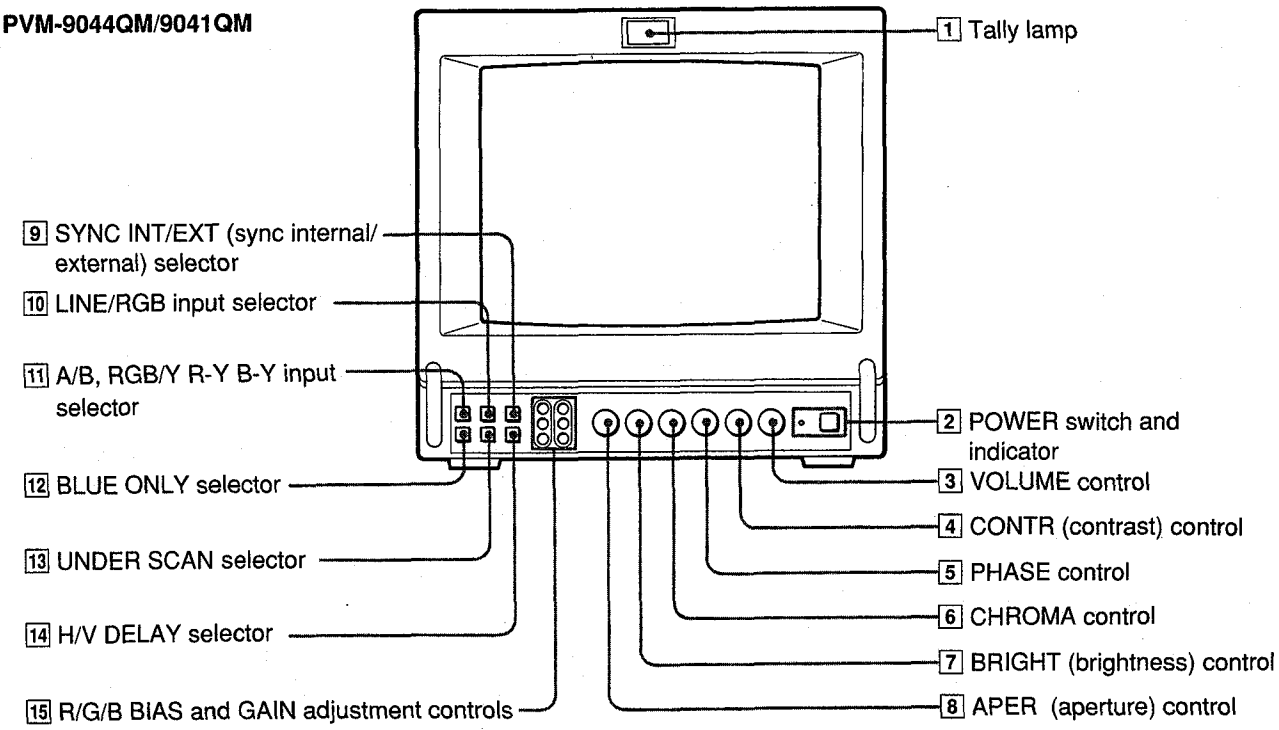
By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.



Location and Function of Parts and Controls

Front

PVM-9044QM/9041QM


1 Tally lamp
9 SYNC INT/EXT (sync internal/ external) selector
10 LINE/RGB input selector
11 A/B, RGB/Y R-Y B-Y input selector
12 BLUE ONLY selector
13 UNDER SCAN selector
14 H/V DELAY selector
15 R/G/B BIAS and GAIN adjustment controls
2 POWER switch and indicator
3 VOLUME control
4 CONTR (contrast) control
5 PHASE control
6 CHROMA control
7 BRIGHT (brightness) control
8 APER (aperture) control

1 Tally lamp

2 POWER switch and indicator
Depress to turn the monitor on. The indicator will light up in green.
The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC12V IN jack decreases, the indicator flashes.

3 VOLUME control
Turn this control clockwise or counterclockwise to obtain the desired volume.

4 CONTR (contrast) control
Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

5 PHASE control
This control is effective only for the NTSC$_{3.58}$ and NTSC$_{4.43}$ color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

Notes

- The PHASE and APER control settings have no effect on an analog RGB signal.
  The APER control has an effect on component signals, but the PHASE does not.
- The PHASE control setting is effective only for the NTSC system.

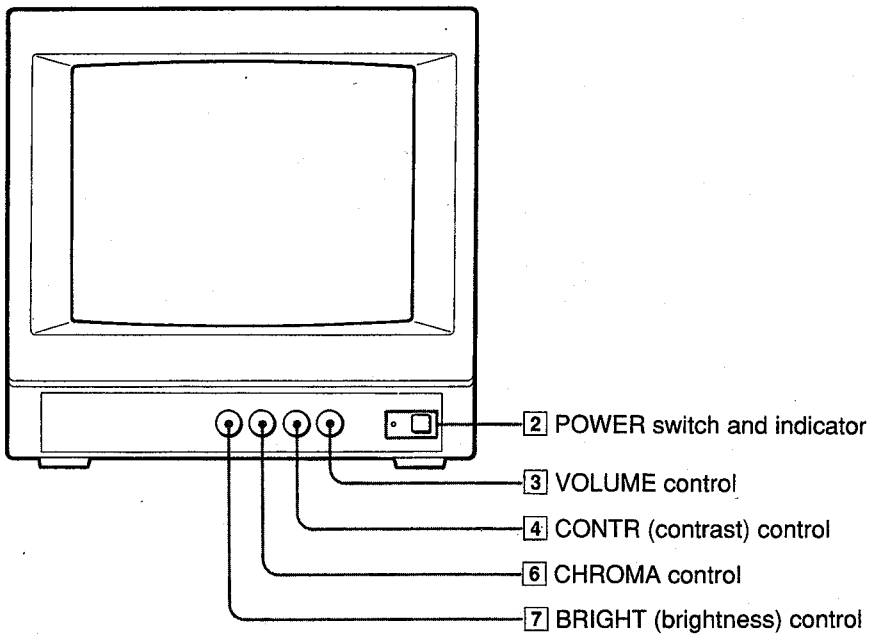
6 CHROMA control
Turn clockwise to make the color intensity stronger and counterclockwise to make it weaker.

7 BRIGHT (brightness) control
Turn clockwise for more brightness and counterclockwise for less.

8 APER (aperture) control
Turn clockwise for more sharpness and counterclockwise for less.

9 SYNC INT/EXT (sync internal/external) selector
Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.
Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

PVM-9040ME



10 LINE/RGB input selector
Select the program to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

11 A/B, RGB/Y R-Y B-Y input selector
When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Depress this button (B) for a signal fed through the LINE B connectors.

When the LINE/RGB input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Depress this button (Y R-Y B-Y) for the component signal.

12 BLUE ONLY selector
Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

13 UNDER SCAN selector
Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

14 H/V DELAY selector
Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

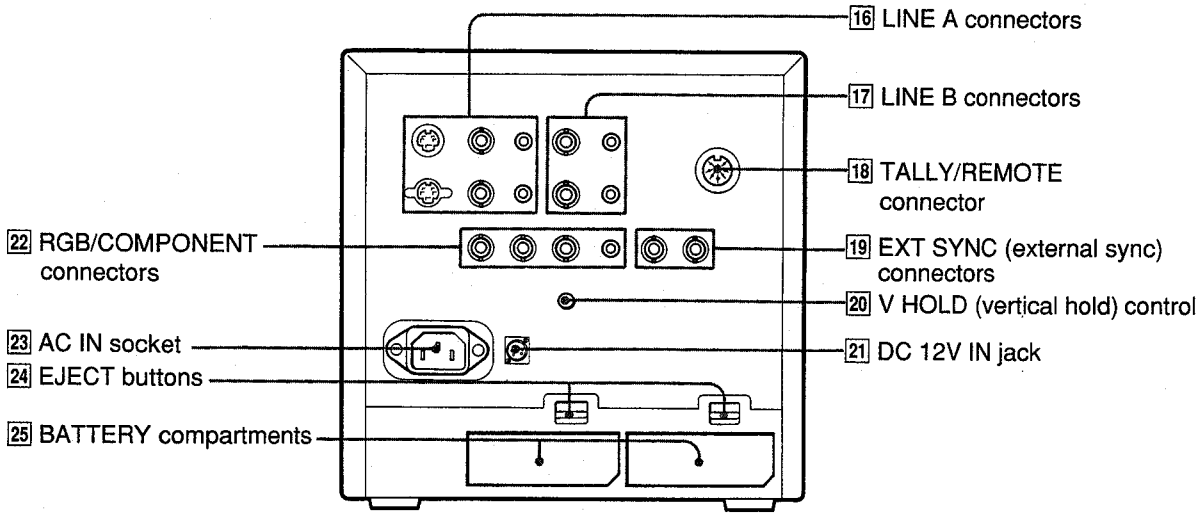
15 R/G/B BIAS and GAIN adjustment controls
Used for white balance fine adjustment.
BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

BIAS: Adjust the white balance and brightness of the screen at the lowlight.
GAIN: Adjust the white balance and brightness of the screen at the highlight.

Location and Function of Parts and Controls

Rear

PVM-9044QM/9041QM


16 LINE A connectors
17 LINE B connectors
18 TALLY/REMOTE connector
22 RGB/COMPONENT connectors
19 EXT SYNC (external sync) connectors
20 V HOLD (vertical hold) control
23 AC IN socket
21 DC 12V IN jack
24 EJECT buttons
25 BATTERY compartments

16 LINE A connectors (PVM-9044QM/9041QM)
To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

16 LINE connectors (PVM-9040ME)

Y/C IN (4-pin mini DIN): Connect to the Y/C separate output of a video camera, VCR or other video equipment.
Y/C OUT (4-pin mini DIN): Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.
VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

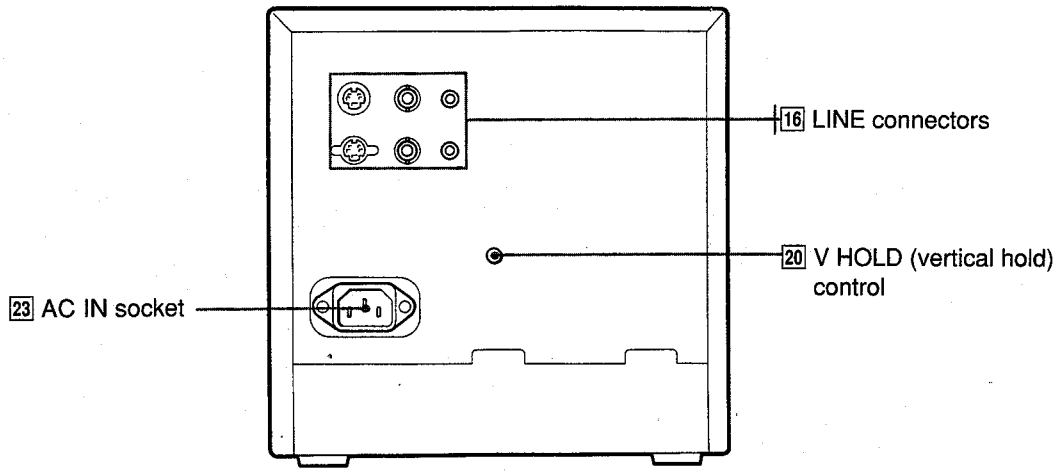
Note

The Y/C IN connector has a priority over the VIDEO IN connector.
When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

17 LINE B connectors
To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

PVM-9040ME



18 TALLY/REMOTE connector (8-pin mini DIN)
Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller. For the pin assignment of this connector, see "Specifications" on page 8.

19 EXT SYNC (external sync) connectors
IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).
OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

20 V HOLD (vertical hold) control
Turn to stabilize the picture if it rolls vertically.

21 DC 12V IN jack (XLR, 4 pin)
Connect the Sony AC-500/500CE AC power adaptor (not supplied).

22 RGB/COMPONENT input connectors

R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):
To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

To monitor the analog RGB signal
Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

To monitor the component signal
Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

23 AC IN socket
Connect the supplied AC power cord to this socket and to a wall outlet.

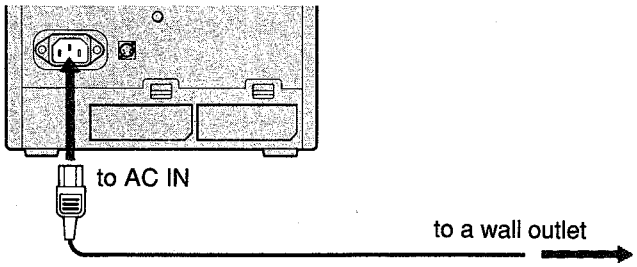
24 EJECT buttons
Press the EJECT button upwards to remove the battery pack.

25 BATTERY compartments
Insert the NP-1A/1B battery pack (not supplied).

Power Sources

House Current (for all models)

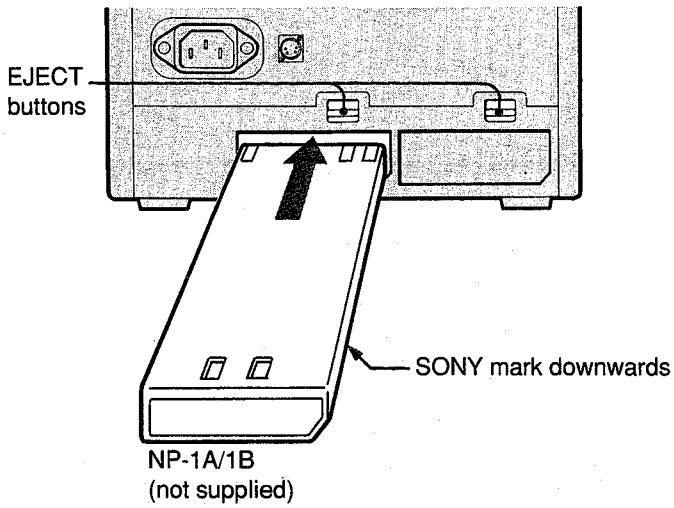
Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



For the PVM-9044QM/9041QM
When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

Rechargeable Battery (PVM-9044QM/9041QM only)

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

For charging, use the BC-1WA battery charger (not supplied) for the NP-1A or the BC-1WB for the NP-1B.

Note

Make sure that the AC power cord and the AC power adaptor are disconnected from the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

Specifications

Video signal

Color system	**PVM-9044QM/9041QM:** PAL, SECAM, NTSC3.58, NTSC4.43 **PVM-9040ME:** PAL, SECAM
Resolution	**PVM-9044QM:** 450 TV lines **PVM-9041QM/9040ME:** 250 TV lines
Aperture correction	–4.0 dB – +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (–3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 7.0% (typical)
V. linearity	Less than 7.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

Inputs and Outputs

Connector \ Model		PVM-9044QM PVM-9041QM	PVM-9040ME
LINE A	Y/C IN	yes	yes
	Y/C OUT	yes	yes
	VIDEO IN	yes	yes
	VIDEO OUT	yes	yes
	AUDIO IN	yes	yes
	AUDIO OUT	yes	yes
LINE B	VIDEO IN	yes	no
	VIDEO OUT	yes	no
	AUDIO IN	yes	no
	AUDIO OUT	yes	no
RGB/ COMPONENT	R/R-Y IN	yes	no
	G/Y IN	yes	no
	B/B-Y IN	yes	no
	AUDIO IN	yes	no
EXT SYNC	IN	yes	no
	OUT	yes	no
TALLY/REMOTE		yes	no

Inputs	Y/C IN: 4-pin mini DIN connector (See the pin assignment on page 8.) VIDEO IN: BNC connector 1Vp-p ± 6 dB, sync negative AUDIO IN: phono jack, –5 dBs, less than 47 kohms R/R-Y, G/Y, B/B-Y: BNC connector R, G, B channels: 0.7 Vp-p, ±6 dB Sync on green: 0.3 Vp-p, negative, 75 ohms terminated R-Y, Y, B-Y channels: 0.7 Vp-p, ±6 dB (Standard color bar signal of 100% chrominance) EXT SYNC IN: BNC connector Composite sync 4 Vp-p, ±6 dB, negative
Loop-through outputs	Y/C OUT: 4-pin mini DIN connector VIDEO OUT: BNC connector, 75 ohms terminated AUDIO OUT: phono jack Output level 0.5 W EXT SYNC OUT: BNC connector, 75 ohms terminated
Tally/remote input	TALLY/REMOTE: 8-pin mini DIN connector (See the pin assignment on page 8.)

General

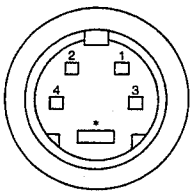
Power consumption	**PVM-9044QM/9041QM** 43 W at AC operation 40 W at DC operation **PVM-9040ME** 39 W at AC operation
Power requirements	100 – 240 V AC, 50/60 Hz (for all models) 12 V DC, with the Sony (NP-1A/1B) battery pack (not supplied) or AC-500/500CE AC power adaptor (not supplied) (PVM-9044QM/9041QM only)
Operating temperature range	0 – 35°C
Storage temperature range	–10 – +40°C
Humidity	0 – 90%
Dimensions	Approx. 217 × 217 × 352.5 mm (w/h/d) ($8^5/_8 \times 8^5/_8 \times 14$ inches) not incl. projecting parts and controls
Weight	Approx. 7.8 kg (17 lb 3 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (PVM-9044QM/9041QM only)

Design and specifications are subject to change without notice.

Specifications

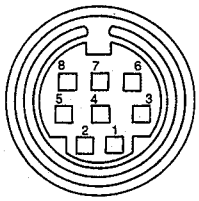
Pin Assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

TALLY/REMOTE connector (8-pin mini DIN) (PVM-9044QM/9041QM only)



Pin No.	Signal
1	Blue only
2	H/V delay
3	GND
4	INT/EXT SYNC
5	Tally
6	Underscan/normal scan
7	A/B or RGB/Y R-Y B-Y
8	RGB/LINE

For remote control, connect the pin of the desired function to pin 3 (GND).